Worksheet 5: Output devices Answers

Task 1 Comparison of printers

1. Indicate whether each of the following statements applies to an inkjet printer, a laser printer or both

Type of printer	Steps
Inkjet	Ink will smudge if still wet
Inkjet	Cartridges will dry out if not used for a while
Laser	More expensive to buy than the other type of printer
Inkjet	Cost of printouts is more expensive per page than the other type of printer
Laser	Very fast printing speed
Inkjet	Cheap to buy
Laser	Uses dry ink toner
Laser	Commonly used in businesses for high quality printing
Both	They can combine black and white and colour printing at the same time
Inkjet	Ideal for low volume home use when quality does not need to be perfect

2. Which printer (inkjet, laser or dot matrix) do you think is the most suitable choice for each of the following applications?

   A – Producing one-off high quality photographs Inkjet

   B – Printing 2-part picking lists in a dusty warehouse Dot matrix

   C – Producing invoices where three copies are required Laser

   D – Producing 5000 high quality colour flyers Laser

   E – Printing labels directly onto CDs Inkjet

Task 2 3D printers

Find four different applications of 3D printers. Explain why 3D printers are used in each of the applications you name.

Possible applications include:

Manufacturing of prosthetic limbs – huge reduction in cost and greater accuracy in matching limb to individual patient

Reconstructive surgery or general surgery – surgeon can "try out" procedure first to ensure actual surgery is more accurate; can produce very accurate parts for surgical procedures

Fashion and art – can experiment with new ideas and materials without the huge cost and waste of using traditional methods

Manufacturing parts for old cars – very old cars are very likely to need parts no longer manufactured; by using existing part as a blueprint it is possible to manufacture new components at a fraction of the cost

Task 3 In-car entertainment screen

You have been asked to design a new in-car entertainment screen aimed at keeping young children in the rear of cars occupied on long journeys. The screen may, or may not be incorporated into the rear of the front headrests.

What type of screen would you recommend, and why?

OLED screen:

Brightness – will be used in broad daylight inside a car / may have a rear sunroof

Battery operated screens may require lower power consumption, power not an issue if connected to the car's power supply

OLED gives off little heat so can safely be incorporated inside a headrest and could be curved to fit the car/headrest as appropriate

OLED has a larger field of view which could suit all passengers in the rear of a car rather than involve more than one personal device.